

DESCRIPTIVE ABSTRACT

Process for the detection of an object in a conductive material and corresponding sensor

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The present invention relates to a process for the detection of an object in an electrically conductive material and a corresponding sensor device.

10 Process characterized in that it consists in generating, by means of a consequentially supplied inductance (3), a magnetic field adapted to induce Foucault currents in said conductive material, when said object (1) is located at a suitable distance from said inductance (3),
15 in abruptly cutting the supply and the current flowing in said inductance (3), in collecting the voltage and/or current signal induced in said inductance (3) by said Foucault currents after cutting, and in analyzing the characteristics of said signal or signals, particularly its
20 decay, thereby to deduce information concerning the nature and/or thickness of the conductive material of the detected object (1) and/or the distance between said inductance (3) and said object (1).

- Fig. 3 -

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